

PTO/SB/08a/b (08-03)
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Substitute	Substitute for form 1449A/B/PTO			Complete if Known		
				Application Number	10/602,720	
INF	ORMATI	ON DISC	LOSURE	Filing Date	June 25, 2003	
STA	STATEMENT BY APPLICANT			First Named Inventor	John T. Moore	
				Art Unit	2811	
	(Use as man	y sheets as nec	essary)	Examiner Name	Not Yet Assigned	
Sheet	1	of	3	Attorney Docket Number	M4065.0675/P675	

			U.S. PA	TENT DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
40	Α	US 2004/0035401	2/2004	Ramachandran et al.	
-1 Va	В	US 2003/0212724	11/2003	Ovshinsky et al.	
1	c	US 2003/0048744	3/2003	Ovshinsky et al.	
	D	US 2003/0212725	11/2003	Ovshinsky et al.	
+	E	US RE 37.259E	7/2001	Ovshinsky	
<del></del>	F	US 3,271,591	9/1966	Ovshinsky	
<del>-t-</del> -	G	US 3,961,314	6/1976	Klose et al.	-
	H	US 3,966,317	6/1976	Wacks et al.	
_+-	li	US 3,983,542	11/1976	Ovshinsky	
-	J	US 3,988,720	10/1976	Ovshinsky	
	K	US 4,177,474	12/1979	Ovshinsky	
	<del> ``</del>	US 4,267,261	5/1981	Hallman et al.	
$\dashv$	М	US 4,597,162	7/1986	Johnson et al.	
+	N	US 4,608,296	8/1986	Keem et al.	
	o	US 4,637,895	1/1987	Ovshinsky et al.	
-	P	US 4,646,266	2/1987	Ovshinsky et al.	
	Q	US 4,664,939	5/1987	Ovshinsky	
-	R	US 4,668,968	5/1987	Ovshinsky et al.	
_	s	US 4,670,763	6/1987	Ovshinsky et al.	
	T	US 4,673,957	6/1987	Ovshinsky et al.	
	<del>l'u</del>		7/1987	Ovshinsky et al.	····
	V	US 4,678,679	·	Ovshinsky et al.	
	w	US 4,696,758	9/1987		
-		US 4,698,234	10/1987	Ovshinsky et al.	
	X	US 4,710,899	12/1987	Young et al.	
-	Y	US 4,728,406	3/1988	Banerjee et al.	
	Z	US 4,737,379	4/1988	Hudgens et al.	
-+	A1	US 4,766,471	8/1988	Ovshinsky et al.	
	B1	US 4,769,338	9/1988	Ovshinsky et al.	
_	C1	US 4,775,425	10/1988	Guha et al.	
	D1	US 4,788,594	11/1988	Ovshinsky et al.	
	E1_	US 4,809,044	2/1989	Pryor et al.	
	F1	US 4,818,717	4/1989	Johnson et al.	
	G1	US 4,843,443	6/1989	Ovshinsky et al.	
	H1	US 4,845,533	7/1989	Pryor et al.	
	11	US 4,853,785	8/1989	Ovshinsky et al.	
	J1	US 4,891,330	1/1990	Guha et al.	
	K1	US 5,128,099	7/1992	Strand et al.	
	L1	US 5,159,661	10/1992	Ovshinsky et al.	
	M1	US 5,166,758	11/1992	Ovshinsky et al.	
	N1	US 5,177,567	1/1993	Klersy et al.	
	01	US 5,296,716	3/1994	Ovshinsky et al.	
	P1	US 5,335,219	8/1994	Ovshinsky et al.	
	Q1	US 5,359,205	10/1994	Ovshinsky	
<u>,,,,,,</u>	R1	US 5,341,328	8/1994	Ovshinsky et al.	
ाप्रा	S1	US 5,406,509	4/1995	Ovshinsky et al.	

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Subst	Substitute for form 1449A/B/PTO			Complete if Known		
0000				Application Number	10/602,720	
IN	<b>FORMATION</b>	N DIS	SCLOSURE	Filing Date	June 25, 2003	
S1	STATEMENT BY APPLICANT			First Named Inventor	John T. Moore	
				Art Unit	2811	
	(Use as many sheets as necessary)			Examiner Name	Not Yet Assigned	
Sheet	2	of	3	Attorney Docket Number	M4065.0675/P675	

TH	1_	T1	US 5,414,271	5/1995	Ovshinsky et al.	
121	<b>∜</b>	U1	US 5,534,711	7/1996	Ovshinsky et al.	<del></del>
<del> </del>	_	V1		7/1996	<del></del>	
┝			US 5,534,712		Ovshinsky et al.	
<del></del>		W1	US 5,536,947	7/1996	Klersy et al.	
<b></b>		X1	US 5,543,737	8/1996	Ovshinsky	
$\longmapsto$		Y1	US 5,591,501	1/1997	Ovshinsky et al.	
$\vdash \vdash$		Z1	US 5,596,522	1/1997	Ovshinsky et al.	
$\vdash \vdash$		A2	US 5,687,112	11/1997	Ovshinsky	
L		B2	US 5,694,054	12/1997	Ovshinsky et al.	
		C2	US 5,714,768	2/1998	Ovshinsky et al.	
		D2	US 5,825,046	10/1998	Czubatyj et al.	
		E2	US 5,912,839	6/1999	Ovshinsky et al.	
		F2	US 5,933,365	8/1999	Klersy et al.	
		G2	US 6,011,757	1/2000	Ovshinsky	
		H2	US 6,087,674	7/2000	Ovshinsky et al.	
		12	US 6,141,241	10/2000	Ovshinsky et al.	
		J2	US 6,339,544	1/2002	Chiang et al.	
	П	K2	US 6,404,665	6/2002	Lowery et al.	
	П	L2	US 6,429,064	8/2002	Wicker	
	П	M2	US 6,437,383	8/2002	Xu	
	T	N2	US 6,462,984	10/2002	Xu et al.	
	$\top$	O2	US 6,480,438	11/2002	Park	
		P2	US 6,487,113	11/2002	Park et al.	
	T	Q2	US 6,501,111	12/2002	Lowery	
		R2	US 6,507,061	1/2003	Hudgens et al.	
	П	S2	US 6,511,862	1/2003	Hudgens et al.	
		T2	US 6,511,867	1/2003	Lowery et al.	
1		U2	US 6,512,241	1/2003	Lai	
<b></b>	T	V2	US 6,514,805	2/2003	Xu et al.	
	Н	W2	US 6,531,373	3/2003	Gill et al.	
	┢	X2	US 6,534,781	3/2003	Dennison	
	$\vdash$	Y2	US 6,545,287	4/2003	Chiang	
	$\vdash$	Z2	US 6.545.907	4/2003	Lowery et al.	
	-	A3	US 6,555,860	4/2003	Lowery et al.	<del></del>
	┢╌	B3	US 6,563,164	5/2003	Lowery et al.	<del></del>
$\vdash$	H	C3	US 6,566,700	5/2003	Xu	
	$\vdash$	D3	US 6,567,293	5/2003	Lowery et al.	
-	-	E3	US 6,569,705	5/2003	Chiang et al.	
$\vdash$		F3	US 6,570,784	5/2003	Lowery	
$\vdash \vdash \vdash$	$\vdash$	G3	US 6,576,921	6/2003	Lowery	
$\vdash$	H	H3	US 6,586,761	7/2003	Lowery	
$\vdash \vdash$	$\vdash$				<del></del>	
$\vdash$	<b> </b>	13	US 6,589,714	7/2003	Maimon et al.	
		J3 K3	US 6,590,807	7/2003	Lowery	
<u> </u>	H		US 6,593,176	7/2003	Dennison	
$\vdash$	$\vdash$	L3	US 6,597,009	7/2003	Wicker	<del></del>
$\vdash \vdash \vdash$	ļ	M3	US 6,605,527	8/2003	Dennison et al.	
$\vdash$	⊢	N3	US 6,613,604	9/2003	Maimon et al.	
<b>  </b>	<u> </u>	03	US 6,621,095	9/2003	Chiang et al.	
<del>  '</del>	. 1 -	P3	US 6,625,054	9/2003	Lowery et al.	
╙₩	V	Q3	US 6,642,102	11/2003	Xu	

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11	NFORMATIO	N DIS	CLOSURE	Filing Date	June 25, 2003	
S	STATEMENT BY APPLICANT			First Named Inventor	John T. Moore	
				Art Unit	2811	
	(Use as many s	theets as n	ecessary)	Examiner Name	Not Yet Assigned	
Sheet	3	of	3	Attorney Docket Number	M4065.0675/P675	

Hist	R3	US 6,646,297	11/2003	Dennison	
1	S3	US 6,649,928	11/2003	Dennison	
	T3	US 6,667,900	12/2003	Lowery et al.	
	U3	US 6,671,710	12/2003	Ovshinsky et al.	
	V3	US 6,673,648	1/2004	Lowrey	
	W3	US 6,673,700	1/2004	Dennison et al.	
	X3	US 6,674,115	1/2004	Hudgens et al.	
	Y3	US 6,687,427	2/2004	Ramalingam et al.	
	Z3	US 6,690,026	2/2004	Peterson	
	A4	US 6,696,355	2/2004	Dennison	
	B4	US 6,687,153	2/2004	Lowery	
	C4	US 6,707,712	3/2004	Lowery	
H	D4	US 6,714,954	3/2004	Ovshinsky et al.	

	FOREIGN PATENT DOCUMENTS								
5i.	Cita	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines,				
Examiner Initials*	Cite No.1	Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>8</sup> (if known)	WW-DD-XXXX	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear				

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NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Signature	Ituan	Hoany	Date Considered	8/18/04	

<sup>&#</sup>x27;Applicant's unique citation designation number (optional). 'Applicant is to place a check mark here if English language Translation is attached.



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Complete if Known Substitute for form 1449A/B/PTO Application Number 10/602,720-Conf. #9961 INFORMATION DISCLOSURE Filing Date June 25, 2003 STATEMENT BY APPLICANT First Named Inventor John T. Moore Art Unit 2811 (Use as many sheets as necessary) **Examiner Name** Not Yet Assigned Sheet 1 of 1 Attorney Docket Number M4065.0675/P675

	U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			

	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (# known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	۳٥			

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	<b>T</b> <sup>2</sup>
HV	AA	KAWAMOTO, Yoji And NISHIDA, Masaru, IONIC CONDUCTION IN As <sub>2</sub> S <sub>3</sub> — Ag <sub>2</sub> S <sub>5</sub> — GeS—GeS—Ag <sub>2</sub> S AND P <sub>2</sub> S <sub>5</sub> —Ag <sub>2</sub> S GLASSES, Journal of Non-Crystalline Solids 20 (1976) 393-404.	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Huan Hoang

8/18/04

Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 11

1	pond to a collection of inform	nation unless it contains a valid OMB control number			
	Complete if Known				
	Application Number	10/602,720			
	Filing Date	June 25, 2003			
	First Named Inventor	John T. Moore			
	Art Unit	N/A			
	Examiner Name	N/A			
	Attorney Docket Number	M4065.0675/P675			

	U.S. PATENT DOCUMENTS					
Examiner nitials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
W	AA	2002/0000666	1/3/2002	Kozicki et al.	1 iguios rupeai	
1	AB	2002/0072188	6/13/2002	Gilton	·	
i	AC	2002/0106849	08/08/2002	Moore		
	AD	2002/0123169	9/2002	Moore et al.		
	AE	2002/0123248	9/2002	Moore et al.	· · · · · · · · · · · · · · · · · · ·	
	AF	2002/0160551	10//31/2002			
	AG	2002/0163828	11/07/2002	Krieger et al.	<del></del>	
	AH	2002/0168820	11/2002	Kozicki		
	Al	2002/0123169	09/05/2002	Moore et al.		
	AJ	2002/0123170	09/05/2002	Moore et al.		
	AK	2002/0123248	09/05/2002	Moore et al.		
	AL	2002/0127886	09/12/2002	Moore et al.		
	AM	2002/0132417	09/09/2002	Li		
	AN	2002/0168852	11/14/2002	Harshfield et al.		
	AO	2002/0190289	12/19/2002	Harshfield et al.		
	AP	2002/0190350	12/19/2002	Kozicki et al.		
	AQ	2003/0001229	01/02/2003	Moore et al.		
	AR	2003/0027416	02/06/2003	Moore		
	AS	2003/0032254	02/13/2003	Gilton		
	AT	2003/0035314	02/20/2003	Kozicki		
	AU	2003/0035315	02/20/2003	Kozicki	· · · · · · · · · · · · · · · · · · ·	
	AV	2003/0038301	02/27/2003	Moore	· · · · · · · · · · · · · · · · · · ·	
1	AW	2003/0043631	03/06/2003	Gilton et al.		
	AX	2003/0045049	03/06/2003	Campbell et al.		
	AY	2003/0045054	03/06/2003	Campbell et al.		
	AZ	2003/0047765		Campbell		
	AA1	2003/0047772	03/13/2003	Li		
	AB1	2003/0047773		Li	· · · · · · · · · · · · · · · · · · ·	
	AC1	2003/0048519	03/13/2003	Kozicki		
	AD1	2003/0049912	03/13/2003	Campbell et al.		
	AE1	2003/0068861	04/10/2003	Li		
	AF1	2003/0068862	04/10/2003	Li		
	AG1	2003/0095426		Hush et al.	· · · · · · · · · · · · · · · · · · ·	
	AH1	2003/0096497	05/22/2003	Moore et al.		
	Al1	2003/0107105	06/12/2003	Kozicki		
	AJ1	2003/0117831	06/26/2003	Hush		
	AK1	2003/0128612	07/10/2003	Moore et al.		
	AL1	2003/0137869	07/24/2003	Kozicki		
	AM1	2003/0143782	07/31/2003	Gilton et al.		
	AN1	2003/1055589	08/21/2003	Campbell et al.		
	A01	2003/0155606	08/21/2003	Campbell et al.		
	AP1	2003/0156447	08/21/2003	Kozicki		
$\perp$	AQ1	2003/0156463	08/21/2003	Casper et al.		
141	AR1	3,622,319	11/1971	Sharp		

PTO/SB/08A (10-01)

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## Complete if Kn wn Substitute for form 1449A/PTO Application Number 10/602,720 INFORMATION DISCLOSURE Filing Date June 25, 2003 STATEMENT BY APPLICANT First Named Inventor John T. Moore Art Unit N/A (use as many sheets as necessary) Examiner Name N/A 2 Sheet of 11 M4065.0675/P675 Attorney Docket Number

THU	AS1	3,743,847	7/1973	Boland
		4,269,935	5/1981	Masters et al.
		4,312,938	1/1982	Drexler, et al.
	AV1	4,316,946	1/1982	Masters, et al.
		4,320,191	3/1982	Yoshikawa et al.
	AX1	4,405,710	9/1983	Balasubramanyam et al.
		4,419,421	12/1983	Wichelhaus, et al.
		4,499,557	2/1985	Holmberg et al.
		4,671,618	06/09/1987	Wu et al.
		4,795,657	1/1989	Formigoni et al.
		4,800,526	01/24/1989	Lewis
	AD2	4,847,674	7/1989	Sliwa et al.
		5,177,567	1/1993	Klersy et al.
	AF2	5,219,788	6/1993	Abernathey et al.
	AG2	5,238,862	8/1993	Blalock et al.
	AH2	5,272,359		Nagasubramanian et al.
		5,314,772	5/24/1994	Kozicki
		5,315,131	5/1994	Kishimoto et al.
	AK2	5,350,484	9/1994	Gardner et al.
	AL2	5,360,981	11/1994	Owen et al.
	AM2	5,500,532	3/19/1996	Kozicki et al.
		5,512,328	4/1996	Yoshimura et al.
	AO2	5,512,773	4/1996	Wolf et al.
		5,726,083	3/1998	Takaishi
		5,751,012	5/12/1998	Wolstenholme et al.
		5,761,115	6/1998	Kozicki et al.
		5,789,277	8/1998	Zahorik et al.
		5,814,527	9/29/1998	Wolstenholme et al
		5,818,749		Harshfield
		5,841,150	11/1998	Gonzalez et al.
<u> </u>		5,846,889	12/1998	Harbison et al.
<u> </u>		5,851,882		Harshfield
igwdown		5,869,843	2/9/1999	Harshfield
<b> </b>		5,896,312	4/20/1999	Kozicki et al.
		5,914,893	6/22/1999	Kozicki et al.
		5,920,788	7/1999	Reinberg
<u> </u>	AC3	5,998,066	12/1999	Block et al.
<del>                                     </del>		6,031,287	2/29/2000	Harshfield
$\vdash$		6,072,716	06/06/2000	Jacobson et al.
<b>  </b>		6,077,729	6/2000	Harshfield
<b> </b>			7/4/2000	Kozicki et al.
		6,177,338	1/2001	Liaw et al.
		6,117,720	9/2000	Harshfield
		6,143,604	11/2000	Chiang et al.
$\vdash$		6,236,059	5/2001	Wolsteinholme et al.
<del></del>		6,297,170	10/2001	Gabriel et al.
<b>├</b> }		6,300,684	10/2001	Gonzalez et al.
-	AN3	6,316,784	11/2001	Zahorik et al.
	AO3	6,329,606	12/2001	Freyman et al.



PTO/SB/08A (10-01)
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Subs	stitute for form 1449A/PTC	)			Complete if Known	
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	IFORMATIO			rining Date	June 25, 2003	
S	TATEMENT	BY.	APPLICANT	First Named Inventor	John T. Moore	
	(use as many st	neets a:	s necessary)	Art Unit	N/A	
	(000 002) 0.		,,,,,	Examiner Name	N/A	
Sheet	3	of	11	Attorney Docket Number	M4065.0675/P675	
WAR	AP3 6,348,365		2/19/2002	Moore et al.		
	AQ3 6,350,679		2/2002	McDaniel et al.		
	AR3 6,376,284		4/2002	Gonzalez et al.		
	AS3 6,388,324		5/14/2002	Kozicki et al.		
	AT3 6,391,688		5/2002	Gonzalez et al.		
	AU3 6,414,376		7/2002	Thakur et al.		
	AV3 6,418,049		7/9/2002	Kozicki et al.		
	AW3 6,420,725		7/16/2002	Harshfield		
	AX3 6,423,628		7/2002	Li et al.		
				Harshfield		
	AZ3 6,469,364		10/2002	Kozicki		
	AA4 6,473,332		10/2002	Ignatiev et al.		
	AB4 6,487,106		11/26/2002	Kozicki		
HV	AC4 6,635,914		10/21/2003	Kozicki		

FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant			
Initials*	No.1	Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>6</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear			
THE	BA	56126916	10/19981	Akira et al.				
-	BB	WO 97/48032	12/18/1997	Kozicki et al.	[ "			
	ВС	WO 99/28914	06/10/1999	Kozicki et al.		1		
	BD	WO 00/48196	08/17/2000	Kozicki et al.				
11/18	BE	WO 02/21542	03/14/2002	Kozicki et al.		$\Box$		

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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See attached Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Erner Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08B (10-01)

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U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE tion Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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S	TATEMENT	BY A	APPLICANT	First Named Inventor	John T. Moore
				Group Art Unit	N/A
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Sheet	4	of	11	Attorney Docket Number	M4065.0675/P675

		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS  Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the	
xaminer nitials	Cite No. <sup>1</sup>	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
HY	CA	Abdel-All, A.; Elshafie, A.; Elhawary, M.M., DC electric-field effect in bulk and thin-film Ge5As38Te57 chalcogenide glass, Vacuum 59 (2000) 845-853.	
1	СВ	Adler, D.; Moss, S.C., Amorphous memories and bistable switches, J. Vac. Sci. Technol. 9 (1972) 1182-1189.	
	CC	Adler, D.; Henisch, H.K.; Mott, S.N., The mechanism of threshold switching in amorphous alloys, Rev. Mod. Phys. 50 (1978) 209-220.	
	CD	Afffi, M.A.; Labib, H.H.; El-Fazary, M.H.; Fadel, M., Electrical and thermal properties of chalcogenide glass system Se75Ge25-xSbx, Appl. Phys. A 55 (1992) 167-169.	
	CE	Afifi,M.A.; Labib, H.H.; Fouad, S.S.; El-Shazly, A.A., Electrical & thermal conductivity of the amorphous semiconductor GexSe1-x, Egypt, J. Phys. 17 (1986) 335-342.	
	CF	Alekperova, Sh.M.; Gadzhieva, G.S., Current-Voltage characteristics of Ag2Se single crystal near the phase transition, Inorganic Materials 23 (1987) 137-139.	
	CG	Aleksiejunas, A.; Cesnys, A., Switching phenomenon and memory effect in thin-film heterojunction of polycrystalline selenium-silver selenide, Phys. Stat. Sol. (a) 19 (1973) K169-K171.	
	СН	Angell, C.A., Mobile ions in amorphous solids, Annu. Rev. Phys. Chem. 43 (1992) 693-717.	L
	CI	Aniya, M., Average electronegativity, medium-range-order, and lonic conductivity in superionic glasses, Solid state lonics 136-137 (2000) 1085-1089.	
	C1	Asahara, Y.; Izumitani, T., Voltage controlled switching in Cu-As-Se compositions, J. Non-Cryst. Solids 11 (1972) 97-104.	
	СК	Asokan, S.; Prasad, M.V.N.; Parthasarathy, G.; Gopal, E.S.R., Mechanical and chemical thresholds in IV-VI chalcogenide glasses, Phys. Rev. Lett. 62 (1989) 808-810	
	CL	Axon Technologies Corporation, Technology Description: <i>Programmable Metalization Cell(PMC)</i> , pp. 1-6 (Pre-May 2000).	
	СМ	Baranovskii, S.D.; Cordes, H., On the conduction mechanism in ionic glasses, J. Chem. Phys. 111 (1999) 7546-7557.	
	CN	Belin, R.; Taillades, G.; Pradel, A.; Ribes, M., Ion dynamics in superionic chalcogenide glasses: complete conductivity spectra, Solid state Ionics 136-137 (2000) 1025-1029.	
	СО	Belin, R.; Zerouale, A.; Pradel, A.; Ribes, M., Ion dynamics in the argyrodite compound Ag7GeSe5I: non-Arrhenius behavior and complete conductivity spectra, Solid State Ionics 143 (2001) 445-455.	
	СР	Benmore, C.J.; Salmon, P.S., Structure of fast ion conducting and semiconducting glassy chalcogenide alloys, Phys. Rev. Lett. 73 (1994) 264-267.	
	CQ	Bernede, J.C., Influence du metal des electrodes sur les caracteristiques courant-tension des structures M-Aq2Se-M, Thin solid films 70 (1980) L1-L4.	
	CR	Bernede, J.C., Polarized memory switching in MIS thin films, Thin Solid Films 81 (1981) 155- 160.	Γ
	cs	Bernede, J.C., Switching and silver movements in Ag2Se thin films, Phys. Stat. Sol. (a) 57 (1980) K101-K104.	I
	СТ	Bernede, J.C.; Abachi, T., Differential negative resistance in metal/insulator/metal structures with an upper bilayer electrode, Thin solid films 131 (1985) L61-L64.	$\int$
	CU	Bernede, J.C.; Conan, A.; Fousenan't, E.; El Bouchairi, B.; Goureaux, G., Polarized memory switching effects in Ag2Se/Se/M thin film sandwiches, Thin solid films 97 (1982) 165-171.	
141	cv	Bernede, J.C.; Khelil, A.; Kettaf, M.; Conan, A., Transition from S- to N-type differential negative resistance in Al-Al2O3-Ag2-xSe1+x thin film structures, Phys. Stat. Sol. (a) 74 (1982)	



PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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				Application Number	10/602,720	
11	NFORMATION	ON DISC	LOSURE	Filing Date	June 25, 2003	
S	TATEMEN'	T BY AP	PLICANT	First Named Inventor	John T. Moore	
				Group Art Unit	N/A	
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Sheet	5	of	11	Attorney Docket Number	M4065.0675/P675	

	r	217-224.	
W	CW	Bondarev, V.N.; Pikhitsa, P.V., A dendrite model of current instability in RbAg4I5, Solid State lonics 70/71 (1994) 72-76.	
Ī	сх	Boolchand, P., The maximum in glass transition temperature (Tg) near x=1/3 in GexSe1-x Glasses, Asian Journal of Physics (2000) 9, 709-72.	
	CY	Boolchand, P.; Bresser, W.J., Mobile silver ions and glass formation in solid electrolytes, Nature 410 (2001) 1070-1073.	
1	CZ	Boolchand, P.; Georgiev, D.G.; Goodman, B., Discovery of the Intermediate Phase in Chalcogenide Glasses, J. Optoelectronics and Advanced Materials, 3 (2001), 703	
	CA1	Boolchand, P.; Selvanathan, D.; Wang, Y.; Georgiev, D.G.; Bresser, W.J., Onset of rigidity in steps in chalcogenide glasses, Properties and Applications of Amorphous Materials, M.F. Thorpe and Tichy, L. (eds.) Kluwer Academic Publishers, the Netherlands, 2001, pp. 97-132.	
	CB1	Boolchand, P.; Enzweiler, R.N.; Tenhover, M., Structural ordering of evaporated amorphous chalcogenide alloy films: role of thermal annealing, Diffusion and Defect Data Vol. 53-54 (1987) 415-420.	
	CC1	Boolchand, P.; Grothaus, J.; Bresser, W.J.; Suranyi, P., Structural origin of broken chemical order in a GeSe2 glass, Phys. Rev. B 25 (1982) 2975-2978.	
	CD1	Boolchand, P.; Grothaus, J.; Phillips, J.C., Broken chemical order and phase separation in GexSe1-x glasses, Solid state comm. 45 (1983) 183-185.	
	CE1	Boolchand, P., Bresser, W.J., Compositional trends in glass transition temperature (Tg), network connectivity and nanoscale chemical phase separation in chalcogenides, Dept. of ECECS, Univ. Cincinnati (October 28, 1999) 45221-0030.	
	CF1	Boolchand, P.; Grothaus, J, Molecular Structure of Melt-Quenched GeSe2 and GeS2 glasses compared, Proc. Int. Conf. Phys. Semicond. (Eds. Chadi and Harrison) 17 <sup>th</sup> (1985) 833-36.	
	CG1	Bresser, W.; Boolchand, P.; Suranyl, P., Rigidity percolation and molecular clustering in network glasses, Phys. Rev. Lett. 56 (1986) 2493-2496.	
	CH1	Bresser, W.J.; Boolchand, P.; Suranyi, P.; de Neufville, J.P, Intrinsically broken chalcogen chemical order in stoichiometric glasses, Journal de Physique 42 (1981) C4-193-C4-196.	
	CI1	Bresser, W.J.; Boolchand, P.; Suranyi, P.; Hernandez, J.G., Molecular phase separation and cluster size in GeSe2 glass, Hyperfine Interactions 27 (1986) 389-392.	
	CJ1	Cahen, D.; Gilet, JM.; Schmitz, C.; Chemyak, L.; Gartsman, K.; Jakubowicz, A., Room- Temperature, electric field induced creation of stable devices in CulnSe2 Crystals, Science 258 (1992) 271-274.	
	CK1	Chatterjee, R.; Asokan, S.; Titus, S.S.K., Current-controlled negative-resistance behavior and memory switching in bulk As-Te-Se glasses, J. Phys. D: Appl. Phys. 27 (1994) 2624-2627.	
	CL1	Chen, C.H.; Tai, K.L., Whisker growth induced by Ag photodoping In glassy GexSe1-x films, Appl. Phys. Lett. 37 (1980) 1075-1077.	
	CM1	Chen, G.; Cheng, J., Role of nitrogen in the crystallization of silicon nitride-doped chalcogenide glasses, J. Am. Ceram. Soc. 82 (1999) 2934-2936.	
	CN1	Chen, G.; Cheng, J.; Chen, W., Effect of Si3N4 on chemical durability of chalcogenide glass, J. Non-Cryst. Sollds 220 (1997) 249-253.	
	CO1	Cohen, M.H.; Neale, R.G.; Paskin, A., A model for an amorphous semiconductor memory device, J. Non-Cryst. Solids 8-10 (1972) 885-891.	
	CP1	Croitoru, N.; Lazarescu, M.; Popescu, C.; Telnic, M.; and Vescan, L., Ohmic and non-ohmic conduction in some amorphous semiconductors, J. Non-Cryst. Solids 8-10 (1972) 781-786.	
	CQ1	Dalven, R.; Gill, R., Electrical properties of beta-Ag2Te and beta-Ag2Se from 4.2 to 300K, J. Appl. Phys. 38 (1967) 753-756.	
	CR1	Davis, E.A., Semiconductors without form, Search 1 (1970) 152-155.	L
	CS1	Dearnaley, G.; Stoneham, A.M.; Morgan, D.V., Electrical phenomena in amorphous oxide films, Rep. Prog. Phys. 33 (1970) 1129-1191.	

PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Palent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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9	STATEMENT	BY AF	PLICANT	First Named Inventor	John T. Moore
				Group Art Unit	N/A
	(use as many s	heets as ne	cessary)	Examiner Name	N/A
Sheet	6	of	11	Attorney Docket Number	M4065.0675/P675

Se, J. Non-Cryst. Se	olids 143 (1992) 162-180.
	shold switching in hydrogenated amorphous silicon, Appl. Phys. Lett. 40
CV1 Drusedau, T.P.; Par silicon/nanodispers Cryst. Solids 198-20	nckow, A.N.; Klabunde, F., The hydrogenated amorphous e metal (SIMAL) system-Films of unique electronic properties, J. Non- 00 (1996) 829-832.
Films 110 (1983) 10	rnede, J.C.; Burgaud, P., Properties of Ag2-xSe1+x/n-Si diodes, Thin Solid 17-113.
x photoconductivity,	rahla, A.; Vautier, C., Role of photoinduced defects in amorphous GexSe1- J. Non-Cryst. Solids 155 (1993) 171-179.
chalcogenide thin fil	is, J.; Galibert, G.; Averous, M., Silver photodissolution in amorphous ms, Thin Solid Films 218 (1992)259-273.
from "in-situ" resista	is, J.; Galibert, G., Ag dissolution kinetics in amorphous GeSe5.5 thin films ince measurements vs time, Phys. Stat. Sol. (a) 123 (1991) 451-460.
Phys. 70A (1996) 5	
materials, J. Non-C	d mechanism for metal photodissolution in amorphous chalcogenide ryst. Solids 130 (1991) 85-97.
Non-Cryst. Solids 1	issolution of metals in chalcogenide glasses: A unified mechanism, J. 37-138 (1991) 1031-1034.
	; Hegab, N.A.; Fadel, M., Conduction mechanism in the pre-switching intaining Te As Ge Si, Vacuum 46 (1995) 701-707.
of Ge20BixSe80-x f	rashy, A., Influence of composition on the electrical and optical properties ilms, Thin Solid Films 376 (2000) 236-240.
chalcogenide glass	phenomenon in evaporated Se-Ge-As thin films of amorphous Vacuum 44 (1993) 851-855.
CG2 Fadel, M.; El-Shair, 43 (1992) 253-257.	H.T., Electrical, thermal and optical properties of Se75Ge7Sb18, Vacuum
	V.J.; Boolchand, P., Direct evidence for stiffness threshold in Chalcogenide Lett. 78 (1997) 4422-4425.
	V.J.; Zhang, M.; Goodman, B.; Boolchand, P., Role of network connectivity c and thermal behavior of covalent glasses, J. Non-Cryst. Solids 222
	Bienenstock, A.; Fuoss, P.H.; Marcus, M.A., Structure and bonding in phous Ag-GeSe2 thin films, Phys. Rev. B 38 (1988) 12388-12403.
selenium, Phys. Sta	A.; Viger, C.; Vautier, C., Conductivity and crystallization of amorphous it. Sol. (a) 64 (1981) 311-316.
Solids 6 (1971) 49-	
Materials Science 2	
synthesized by tem currently ASAP.	(in, Y.; Yang, P.; Xia, Y., Single-crystalline nanowires of Ag2Se can be plating against nanowires of trigonal Se, J. Am. Chem. Soc. (2001)
on reversible phase 1013-1018.	mura, M.; Shimizu, T.; Suzuki, M.; Okano, S., Nonvolatile memory based transition phenomena in telluride glasses, Jap. J. Appl. Phys. 28 (1989)
of Ge-Se chalcoger Cryst. Solids 298 (2	
	T.; Sangleboeuf, JC; Melscoet, I.; Lucas, J., Hardness, toughness, and

PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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				Group Art Unit	N/A	
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Sheet	7	of	11	Attorney Docket Number	M4065.0675/P675	

		scratchability of germanium-selenium chalcogenide glasses, J. Am. Ceram. Soc. 85 (2002) 1545-52.
44	CR2	Gupta, Y.P., On electrical switching and memory effects in amorphous chalcogenides, J. Non-Cryst. Sol. 3 (1970) 148-154.
1	CS2	Haberland, D.R.; Stiegler, H., New experiments on the charge-controlled switching effect in amorphous semiconductors, J. Non-Cryst. Solids 8-10 (1972) 408-414.
	CT2	Haifz, M.M.; Ibrahim, M.M.; Dongol, M.; Hammad, F.H., Effect of composition on the structure and electrical properties of As-Se-Cu glasses, J. Apply. Phys. 54 (1983) 1950-1954.
	CU2	Hajto, J.; Rose, M.J.; Osborne, I.S.; Snell, A.J.; Le Comber, P.G.; Owen, A.E., Quantization effects in metal/a-Si:H/metal devices, Int. J. Electronics 73 (1992) 911-913.
	CV2	Hajto, J.; Hu, J.; Snell, A.J.; Turvey, K.; Rose, M., DC and AC measurements on metal/a-Si:H/metal room temperature quantised resistance devices, J. Non-Cryst. Solids 266-269 (2000) 1058-1061.
	CW2	Hajto, J.; McAuley, B.; Snell, A.J.; Owen, A.E., Theory of room temperature quantized resistance effects in metal-a-Si:H-metal thin film structures, J. Non-Cryst. Solids 198-200 (1996) 825-828.
	CX2	Hajto, J.; Owen, A.E.; Snell, A.J.; Le Comber, P.G.; Rose, M.J., Analogue memory and ballistic electron effects in metal-amorphous silicon structures, Phil. Mag. B 63 (1991) 349-369.
	CY2	Hayashi, T.; Ono, Y.; Fukaya, M.; Kan, H., Polarized memory switching in amorphous Se film, Japan. J. Appl. Phys. 13 (1974) 1163-1164.
	CZ2	Hegab, N.A.; Fadel, M.; Sedeek, K., Memory switching phenomena in thin films of chalcogenide semiconductors, Vacuum 45 (1994) 459-462.
	CA3	Helbert et al., Intralevel hybrid resist process with submicron capability, SPIE Vol. 333 SUBMICRON LITHOGRAPHY, pp. 24-29 (1982).
	СВЗ	Hilt, DISSERTATION: Materials characterization of Silver Chalcogenide Programmable Metalization Cells, Arizona State University, pp. Title page-114 (UMI Company, May 1999).
	ССЗ	Hirose et al., High Speed Memory Behavior and Reliability of an Amorphous As <sub>2</sub> S <sub>3</sub> Film Doped Ag, Phys. Stat. Soc. (a) 61, pp. 87-90 (1980).
	CD3	Hirose, Y.; Hirose, H., Polarity-dependent memory switching and behavior of Ag dendrite in Ag-photodoped amorphous As2S3 films, J. Appl. Phys. 47 (1976) 2767-2772.
	CE3	Holmquist et al., Reaction and Diffusion in Silver-Arsenic Chalcogenide Glass Systems, 62 J. AMER. CERAM, SOC., No. 3-4, pp. 183-188 (March-April 1979).
	CF3	Hong, K.S.; Speyer, R.F., Switching behavior in II-IV-V2 amorphous semiconductor systems, J. Non-Cryst. Solids 116 (1990) 191-200.
	CG3	Hosokawa, S., Atomic and electronic structures of glassy GexSe1-x around the stiffness threshold composition, J. Optoelectronics and Advanced Materials 3 (2001) 199-214.
	СНЗ	Hu, J.; Snell, A.J.; Hajto, J.; Owen, A.E., Constant current forming in Cr/p+a-/Si:H/V thin film devices, J. Non-Cryst. Solids 227-230 (1998) 1187-1191.
	CI3	Hu, J.; Hajto, J.; Snell, A.J.; Owen, A.E.; Rose, M.J., Capacitance anomaly near the metal- non-metal transition in Cr-hydrogenated amorphous Si-V thin-film devices, Phil. Mag. B. 74 (1996) 37-50.
	C13	Hu, J.; Snell, A.J.; Hajto, J.; Owen, A.E., Current-Induced instability in Cr-p+a-Si:H-V thin film devices, Phil. Mag. B 80 (2000) 29-43.
	СКЗ	Huggett et al., Development of silver sensitized germanium selenide photoresist by reactive sputter etching in SF6, 42 Appl. Phys. L. tt., No. 7, pp. 592-594 (April 1983).
	CL3	lizima, S.; Sugi, M.; Kikuchi, M.; Tanaka, K., Electrical and thermal properties of semiconducting glasses As-Te-Ge, Solid State Comm. 8 (1970) 153-155.
Wil	СМЗ	Ishikawa, R.; Kikuchi, M., Photovoltaic study on the photo-enhanced diffusion of Ag in amorphous films of Ge2S3, J. Non-Cryst. Solids 35 & 36 (1980) 1061-1066.

PTO/SB/08B (10-01)

Approved for use through 10/31/2002 OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduced Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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				Group Art Unit	N/A	
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Sheet	neet 8 of 11			Attorney Docket Number	M4065.0675/P675	

14	CN3	lyetomi, H.; Vashishta, P.; Kalla, R.K., Incipient phase separation in Ag/Ge/Se glasses: clustering of Ag atoms, J. Non-Cryst. Solids 262 (2000) 135-142.
,	CO3	Jones, G.; Collins, R.A., Switching properties of thin selenium films under pulsed bias, Thin Solid Films 40 (1977) L15-L18.
	CP3	Jouille, A.M.; Marucchi, J., On the DC electrical conduction of amorphous As2Se7 before switching, Phys. Stat. Sol. (a) 13 (1972) K105-K109.
	CQ3	Joullie, A.M.; Marucchi, J., Electrical properties of the amorphous alloy As2Se5, Mat. Res. Bull. 8 (1973) 433-442.
	CR3	Kaplan, T.; Adler, D., Electrothermal switching in amorphous semiconductors, J. Non-Cryst. Solids 8-10 (1972) 538-543.
	CS3	Kawaguchi et al., Mechanism of photosurface deposition, 164-166 J. Non-CRYST. SOLIDS, pp. 1231-1234 (1993).
	СТЗ	Kawaguchi, T.; Maruno, S.; Elliott, S.R., Optical, electrical, and structural properties of amorphous Ag-Ge-S and Ag-Ge-Se films and comparison of photoinduced and thermally induced phenomena of both systems, J. Appl. Phys. 79 (1996) 9096-9104.
	CU3	Kawaguchi, T.; Masui, K., Analysis of change in optical transmission spectra resulting from Ag photodoping in chalcogenide film, Japn. J. Appl. Phys. 26 (1987) 15-21.
	CV3	Kawasaki, M.; Kawamura, J.; Nakamura, Y.; Aniya, M., Ionic conductivity of Agx(GeSe3)1-x (0<=x<=0.571) glasses, Solid state Ionics 123 (1999) 259-269.
	CW3	Kluge, G.; Thomas, A.; Klabes, R.; Grotzschel, R., Silver photodiffusion in amorphous GexSe100-x, J. Non-Cryst. Solids 124 (1990) 186-193.
	CX3	Kolobov, A.V., On the origin of p-type conductivity in amorphous chalcogenides, J. Non-Cryst. Solids 198-200 (1996) 728-731.
	CY3	Kolobov, A.V., Lateral diffusion of silver in vitreous chalcogenide films, J. Non-Cryst. Solids 137-138 (1991) 1027-1030.
	CZ3	Kolobov et al., Photodoping of amorphous chalcogenides by metals, Advances in Physics, 1991, Vol. 40, No. 5, pgs. 625-684.
	CA4	Korkinova, Ts.N.; Andreichin,R.E., Chalcogenide glass polarization and the type of contacts, J. Non-Cryst. Solids 194 (1996) 256-259.
	CB4	Kotkata, M.F.; Afif, M.A.; Labib, H.H.; Hegab, N.A.; Abdel-Aziz, M.M., Memory switching in amorphous GeSeTI chalcogenide semiconductor films, Thin Solid Films 240 (1994) 143-146.
	CC4	Kozicki et al., Silver incorporation in thin films of selenium rich Ge-Se glasses, International Congress on Glass, Volume 2, Extended Abstracts, July 2001, pgs. 8-9.
	CD4	Michael N. Kozicki, 1. Programmable Metallization Cell Technology Description, February 18, 2000
	CE4	Michael N. Kozicki, Axon Technologies Corp. and Arizona State University, Presentation to Micron Technology, Inc., April 6, 2000
	CF4	Kozicki et al., Applications of Programmable Resistance Changes In Metal-Doped Chalcogenides, Electrochemical Society Proceedings, Volume 99-13, 1999, pgs. 298-309.
	CG4	Kozicki et al., Nanoscale effects in devices based on chalcogenide solid solutions, Superlattices and Microstructures, Vol. 27, No. 516, 2000, pgs. 485-488.
	CH4	Kozicki et al., Nanoscale phase separation in Ag-Ge-Se glasses, Microelectronic Engineering 63 (2002) pgs 155-159.
	CI4	Lakshminarayan, K.N.; Srivastava, K.K.; Panwar, O.S.; Dumar, A., Amorphous semiconductor devices: memory and switching mechanism, J. Instn Electronics & Telecom. Engrs 27 (1981) 16-19.
	CJ4	Lai, M.; Goyal, N., Chemical bond approach to study the memory and threshold switching chalcogenide glasses, Indian Journal of pure & appl. phys. 29 (1991) 303-304.
J.W	ĆK4	Leimer, F.; Stotzel, H.; Kottwitz, A., Isothermal electrical polarisation of amorphous GeSe films with blocking Al contacts influenced by Poole-Frenkel conduction, Phys. Stat. Sol. (a) 29 (1975) K129-K132.

O 1 P E C 2 NOV 0 4 2003 2

PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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				Application Number	10/602,720	
INF	FORMATIC	ON DISC	CLOSURE	Filing Date	June 25, 2003	
ST	ATEMENT	BY AF	PLICANT	First Named Inventor	John T. Moore	
				Group Art Unit	N/A	
	(use as many	sheets as ne	cessary)	Examiner Name	N/A	
Sheet	9	of	11	Attorney Docket Number	M4065.0675/P675	

Hu	CL4	Leung, W.; Cheung, N.; Neureuther, A.R., Photoinduced diffusion of Ag in GexSe1-x glass, Appl. Phys. Lett. 46 (1985) 543-545.	
1	CM4	Matsushita, T.; Yamagami, T.; Okuda, M., Polarized memory effect observed on Se-SnO2 system, Jap. J. Appl. Phys. 11 (1972) 1657-1662.	
	CN4	Matsushita, T.; Yamagami, T.; Okuda, M., Polarized memory effect observed on amorphous selenium thin films, Jpn. J. Appl. Phys. 11 (1972) 606.	
	CO4	Mazurier, F.; Levy, M.; Souquet, J.L, Reversible and irreversible electrical switching in TeO2- V2O5 based glasses, Journal de Physique IV 2 (1992) C2-185 - C2-188.	
	CP4	McHardy et al., The dissolution of metals in amorphous chalcogenides and the effects o electron and ultraviolet radiation, 20 J. Phys. C.: Solid State Phys., pp. 4055-4075 (1987)f	
	CQ4	Messoussi, R.; Bernede, J.C.; Benhida, S.; Abachi, T.; Latef, A., Electrical characterization of M/Se structures (M=Ni,Bi), Mat. Chem. And Phys. 28 (1991) 253-258.	
	CR4	Mitkova, M.; Boolchand, P., Microscopic origin of the glass forming tendency in chalcogenides and constraint theory, J. Non-Cryst. Solids 240 (1998) 1-21.	
	CS4	Mitkova, M.; Kozicki, M.N., Silver incorporation in Ge-Se glasses used in programmable metallization cell devices, J. Non-Cryst. Solids 299-302 (2002) 1023-1027.	
	CT4	Mitkova, M.; Wang, Y.; Boolchand, P., Dual chemical role of Ag as an additive in chalcogenide glasses, Phys. Rev. Lett. 83 (1999) 3848-3851.	
	CU4	Miyatani, Sy., Electronic and ionic conduction in (AgxCu·1-x)2Se, J. Phys. Soc. Japan 34 (1973) 423-432.	
	CV4	Miyatani, Sy., Electrical properties of Ag2Se, J. Phys. Soc. Japan 13 (1958) 317.	
	CW4	Miyatani, Sy., Ionic conduction in beta-Ag2Te and beta-Ag2Se, Journal Phys. Soc. Japan 14 (1959) 996-1002.	
	CX4	Mott, N.F., Conduction in glasses containing transition metal lons, J. Non-Cryst. Solids 1 (1968) 1-17.	
	CY4	Nakayama, K.; Kitagawa, T.; Ohmura, M.; Suzuki, M., Nonvolatile memory based on phase transitions in chalcogenide thin films, Jpn. J. Appl. Phys. 32 (1993) 564-569.	
	CZ4	Nakayama, K.; Kojima, K.; Hayakawa, F.; Imai, Y.; Kitagawa, A.; Suzuki, M., Submicron nonvolatile memory cell based on reversible phase transition in chalcogenide glasses, Jpn. J. Appl. Phys. 39 (2000) 6157-6161.	
	CA5	Nang, T.T.; Okuda, M.; Matsushita, T.; Yokota, S.; Suzuki, A., Electrical and optical parameters of GexSe1-x amorphous thin films, Jap. J. App. Phys. 15 (1976) 849-853.	
	CB5	Narayanan, R.A.; Asokan, S.; Kumar, A., Evidence concerning the effect of topology on electrical switching in chalcogenide network glasses, Phys. Rev. B 54 (1996) 4413-4415.	
	CC5	Neale, R.G.; Aseltine, J.A., The application of amorphous materials to computer memories, IEEE transactions on electron dev. Ed-20 (1973) 195-209.	
	CD5	Ovshinsky S.R.; Fritzsche, H., Reversible structural transformations in amorphous semiconductors for memory and logic, Mettalurgical transactions 2 (1971) 641-645.	
	CE5	Ovshinsky, S.R., Reversible electrical switching phenomena in disordered structures, Phys. Rev. Lett. 21 (1968) 1450-1453.	
	CF5	Owen, A.E.; LeComber, P.G.; Sarrabayrouse, G.; Spear, W.E., New amorphous-silicon electrically programmable nonvolatile switching device, IEE Proc. 129 (1982) 51-54	
	CG5	Owen, A.E.; Firth, A.P.; Ewen, P.J.S., Photo-induced structural and physico-chemical changes in amorphous chalcogenide semiconductors, Phil. Mag. B 52 (1985) 347-362.	
	CH5	Owen, A.E.; Le Comber, P.G.; Hajto, J.; Rose, M.J.; Snell, A.J., Switching in amorphous devices, Int. J. Electronics 73 (1992) 897-906.	
	CI5	Owen et al., Metal-Chalcogenide Photoresists for High Resolution Lithography and Sub- Micron Structures, Nanostructure Physics and Fabrication, pp. 447-451 (M. Reed ed. 1989).	
<u> </u>	CJ5	Pearson, A.D.; Miller, C.E., Filamentary conduction in semiconducting glass diodes, App. Phys. Lett. 14 (1969) 280-282.	
W/	CK5	Pinto, R.; Ramanathan, K.V., Electric field induced memory switching in thin films of the	



PTO/SB/08B (10-01)
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Sul	bstitute for form 1449B.	PTO		Complete if Known		
				Application Number	10/602,720	
11	NFORMATI	ON DISC	LOSURE	Filing Date	June 25, 2003	
S	TATEMEN	T BY AP	PLICANT	First Named Inventor	John T. Moore	
				Group Art Unit	N/A	
	(use as man	y sheets as nec	essary)	Examiner Name	N/A	
Sheet	10	of	11	Attorney Docket Number	M4065.0675/P675	

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	T	chalcogenide system Ge-As-Se, Appl. Phys. Lett. 19 (1971) 221-223.							
Hy	CL5	Popescu, C., The effect of local non-uniformities on thermal switching and high field behavior of structures with chalcogenide glasses, Solid-state electronics 18 (1975) 671-681.							
1	СМ5	Popescu, C.; Croitoru, N., The contribution of the lateral thermal instability to the switching phenomenon, J. Non-Cryst. Solids 8-10 (1972) 531-537.							
	CN5	Popov, A.I.; Geller, I.KH.; Shemetova, V.K., Memory and threshold switching effects in amorphous selenium, Phys. Stat. Sol. (a) 44 (1977) K71-K73.							
	CO5	Prakash, S.; Asokan, S.; Ghare, D.B., Easily reversible memory switching in Ge-As-Te glasses, J. Phys. D: Appl. Phys. 29 (1996) 2004-2008.							
	CP5	Rahman, S.; Sivarama Sastry, G., Electronic switching in Ge-Bi-Se-Te glasses, Mat. Scl. and Eng. B12 (1992) 219-222.							
	CQ5	Ramesh, K.; Asokan, S.; Sangunni, K.S.; Gopal, E.S.R., Electrical Switching in germanium telluride glasses doped with Cu and Ag, Appl. Phys. A 69 (1999) 421-425.							
	CR5	Rose, M.J.; Hajto, J.; Lecomber, P.G.; Gage, S.M.; Choi, W.K.; Snell, A.J.; Owen, A.E., Amorphous silicon analogue memory devices, J. Non-Cryst. Solids 115 (1989) 168-170.							
	CS5	Rose,M.J.;Snell,A.J.;Lecomber,P.G.;Hajto,J.;Fitzgerald,A.G.;Owen,A.E., Aspects of non-volatility in a -Si:H memory devices, Mat. Res. Soc. Symp. Proc. V 258, 1992, 1075-1080.							
	СТ5	Schuocker, D.; Rieder, G., On the reliability of amorphous chalcogenide switching devices, J. Non-Cryst. Solids 29 (1978) 397-407.							
	CU5	Sharma, A.K.; Singh, B., Electrical conductivity measurements of evaporated selenium films in vacuum, Proc. Indian Natn. Sci. Acad. 46, A, (1980) 362-368.							
	CV5	Sharma, P., Structural, electrical and optical properties of silver selenide films, Ind. J. Of pure and applied phys. 35 (1997) 424-427.							
	CW5	Shimizu et al., The Photo-Erasable Memory Switching Effect of Ag Photo-Doped Chalcogenide Glasses, 46 B. CHEM SOC. JAPAN, No. 12, pp. 3662-3365 (1973).							
	CX5	Snell, A.J.; Lecomber, P.G.; Hajto, J.; Rose, M.J.; Owen, A.E.; Osborne, I.L., Analogue memory effects in metal/a-Si:H/metal memory devices, J. Non-Cryst. Solids 137-138 (1991) 1257-1262.							
	CY5	Snell, A.J.; Hajto, J.; Rose, M.J.; Osborne, L.S.; Holmes, A.; Owen, A.E.; Gibson, R.A.G., Analogue memory effects in metal/a-Si:H/metal thin film structures, Mat. Res. Soc. Symp. Proc. V 297, 1993, 1017-1021.							
	CZ5	Steventon, A.G., Microfilaments in amorphous chalcogenide memory devices, J. Phys. D: Appl. Phys. 8 (1975) L120-L122.							
	CA6	Steventon, A.G., The switching mechanisms in amorphous chalcogenide memory devices, J. Non-Cryst. Solids 21 (1976) 319-329.							
	CB6	Stocker, H.J., Bulk and thin film switching and memory effects in semiconducting chalcogenide glasses, App. Phys. Lett. 15 (1969) 55-57.							
	CC6	Tanaka, K., Ionic and mixed conductions in Ag photodoping process, Mod. Phys. Lett B 4 (1990) 1373-1377.							
	CD6	Tanaka, K.; lizima, S.; Sugi, M.; Okada, Y.; Kikuchi, M., Thermal effects on switching phenomenon in chalcogenide amorphous semiconductors, Solid State Comm. 8 (1970) 387-389.							
	CE6	Thornburg, D.D., Memory switching in a Type I amorphous chalcogenide, J. Elect. Mat. 2 (1973) 3-15.							
	CF6	Thornburg, D.D., Memory switching in amorphous arsenic triselenide, J. Non-Cryst. Solids 11 (1972) 113-120.							
	CG6	Thornburg, D.D.; White, R.M., Electric field enhanced phase separation and memory switching in amorphous arsenic triselenide, Journal (??) (1972) 4609-4612.							
	CH6	Tichy, L.; Ticha, H., Remark on the glass-forming ability in GexSe1-x and AsxSe1-x systems, J. Non-Cryst. Solids 261 (2000) 277-281.							
WW	CI6	Titus, S.S.K.; Chatterjee, R.; Asokan, S., Electrical switching and short-range order in As-Te							

PTO/SB/08B (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE on Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Su	bstitute for form 1449B/P	то		Complete if Known		
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S	STATEMENT	BY A	PPLICANT	First Named Inventor	John T. Moore	
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Sheet	11	of	11	Attorney Docket Number	M4065.0675/P675	

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		glasses, Phys. Rev. B 48 (1993) 14650-14652.	
H	CJ6	Tranchant,S.;PeytavIn,S.;Ribes,M.;Flank,A.M.;Dexpert,H.;Lagarde,J.P., Silver chalcogenide glasses Ag-Ge-Se: Ionic conduction and exafs structural investigation, Transport-structure relations in fast ion and mixed conductors Proceedings of the 6th Riso International symposium. 9-13 September 1985.	
	CK5	Tregouet, Y.; Bernede, J.C., Silver movements in Ag2Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54.	
	CL5	Uemura, O.; Kameda, Y.; Kokai, S.; Satow, T., Thermally induced crystallization of amorphous Ge0.4Se0.6, J. Non-Cryst. Solids 117-118 (1990) 219-221.	
	CM6	Uttecht, R.; Stevenson, H.; Sie, C.H.; Griener, J.D.; Raghavan, K.S., Electric field induced filament formation in As-Te-Ge glass, J. Non-Cryst. Solids 2 (1970) 358-370.	
	CIN	Viger, C.; Lefrancois, G.; Fleury, G., Anomalous behaviour of amorphous selenium films, J. Non-Cryst. Solids 33 (1976) 267-272.	
	CO6	Vodenicharov, C.; Parvanov,S.; Petkov,P., Electrode-limited currents in the thin-film M-GeSe-M system, Mat. Chem. And Phys. 21 (1989) 447-454.	
	CP6	Wang, SJ.; Mislum, G.R.; Camp, J.C.; Chen, KL.; Tigelaar, H.L., High-performance Metal/silicide antifuse, IEEE electron dev. Lett. 13 (1992)471-472.	
	CQ6	Weirauch, D.F., Threshold switching and thermal filaments in amorphous semiconductors, App. Phys. Lett. 16 (1970) 72-73.	
	CR6	West, W.C.; Sieradzki, K.; Kardynal, B.; Kozicki, M.N., Equivalent circuit modeling of the Ag As0.24S0.36Ag0.40 Ag System prepared by photodissolution of Ag, J. Electrochem. Soc. 145 (1998) 2971-2974	
	CS6	West, W.C., Electrically erasable non-volatile memory via electrochemical deposition of multifractal aggregates, Ph.D. Dissertation, ASU 1998	
M	CS7	Zhang, M.; Mancini, S.; Bresser, W.; Boolchand, P., Variation of glass transition temperature, Tg, with average coordination number, <m>, in network glasses: evidence of a threshold behavior in the slope  dTg/d<m>  at the rigidity percolation threshold (<m>=2.4), J. Non-Cryst. Solids 151 (1992) 149-154.</m></m></m>	

Examiner Signature	Hran	Hrang	Date Considered	8/18	104	
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